

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-4, 7-9, 11-18, 21 and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Gilchrist (U.S. 7042855 B1).
3. Regarding claim 1. Gilchrist teaches (fig. 8) a method for supporting an interworking between a WLAN and a mobile communications system, the mobile communications system having a first support node (803) for interfacing a radio access network to a core network and a second support node (804) for interfacing the mobile communications system to a second communications system, the method comprising the steps of: providing an IWF (MSC/IWF) associated with the WLAN and coupled to the mobile communications system; establishing at least one tunneling protocol - user plane tunnel between the IWF (MSC/IWF) and the second support node (804) for transferring data signals; and establishing at least one tunneling protocol - control plane tunnel between the first support node (803) and the second support node (802) for transferring control signals (col. 5, line 55–67).

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4. Regarding claims 2 and 16, Gilchrist teaches (fig. 8) the mobile communications network comprises a UMTS network, the first support node comprises SGSN (803), the second support node comprises a GGSN (804), the tunneling protocol - user plane tunnel comprises a GPRS tunneling protocol (col. 4, lines 8-28) - user plane (GTP-U) tunnel, and the tunneling protocol - control plane tunnel comprises a GPRS tunneling protocol - control plane (GTP-C) tunnel (col. 4, lines 8-28).

5. Regarding claims 3 and 17, Gilchrist teaches (fig. 8) the IWF is configured as a logical SGSN with respect to the data signals.

6. Regarding claims 4 and 18, Gilchrist teaches (col. 4, lines 8-48) defining a GTP tunnel in a GTP-U for at least one PDP context in at least one of the GGSN and the IWF.

7. Regarding claims 7 and 21, Gilchrist teaches (col. 3, lines 38-52) a GTP-C carries GPRS mobility management functions.

8. Regarding claims 8 and 22, Gilchrist teaches (fig. 8) providing access to both the WLAN and the mobile communications system through a single point of attachment consisting of the GGSN (804).

9. Regarding claim 9, Gilchrist teaches (fig. 8) core network includes, the GGSN (804) and the SGSN (803), and maintaining a connection between a UE (801) and the core network while

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diverting data to the UE (801) through the at least one GTP-U tunnel between the GGSN (804) and the IWF (MSC/IWF).

10. Regarding claim 11, Gilchrist teaches (fig. 9) authenticating a UE by the mobile communications network; communicating a result of said authenticating step to the IWF through the GGSN.

11. Regarding claim 12, Gilchrist teaches (col. 4, lines 8-28 and col. 10, lines 1-48) the steps of: registering a WLAN coverage area as a different Routing Area (RA) with the mobile communications network; and specifying an IWF address and Tunnel Endpoint Identifiers (TEIDs) for said step of establishing the at least one GTP-U tunnel, when one of a Packet Data Protocol (PDP) request of a modify PDP request is received from a User Equipment (UE).

12. Regarding claim 12, Gilchrist teaches (col. 4, lines 8-28 and col. 10, lines 1-48) the steps of: employing the GGSN as a Foreign Agent (FA) to handle UE mobility; and informing the SGSN to establish the at least one GTP-U tunnel.

13. Regarding claim 14, Gilchrist teaches (fig. 9) the step of employing encryption used by the mobile communications network for a user connecting to the WLAN.

14. Regarding claim 15, Gilchrist teaches (fig. 8) an apparatus for supporting an interworking between a WLAN and mobile communications network, the mobile communications network

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having a first support node (803) for interfacing a radio access network to a core network and a second support node (804) for interfacing the mobile communications system to a second communications system, the interworking being facilitated by an IWF (MSC/IWF), the apparatus comprising: means for establishing at least one tunneling protocol - user plane tunnel between the IWF (MSC/IWF) and the second support node for transferring data signals; and means for establishing at least one tunneling protocol - control plane tunnel between the first support node and the second support node (804) for transferring control signals (col. 9, line 42 – col. 10, line 11).

15. Regarding claim 23, Gilchrist teaches (fig. 8) a mobile terminal, comprising: means for forwarding an associate request to an access point of a wireless local area network (col. 6, lines 21-33); means for receiving an associate response from said access point of said wireless local area network (col. 10, lines 1-47); means for registering a wireless local area network coverage area as a new routing area (col. 10, lines 48-52); means for establishing data communications between said mobile terminal and a gateway general packet radio service (GPRS) support node via an inter-working function; and means for establishing signaling communications between said mobile terminal and a gateway general packet radio service (GPRS) support node via a universal mobile telecommunications system (UMTS) terrestrial radio access network and a serving GPRS support node (col. 5, line 55–67).

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16. Regarding claim 24, Gilchrist teaches (col. 10, lines 1-48) means for registering a wireless local area network coverage area as a new routing area comprises forwarding a packet data protocol context request to said serving GPRS support node.

17. Regarding claim 25, Gilchrist teaches (col. 10, lines 1-48) means for registering a wireless local area network coverage area as a new routing area comprises forwarding a modify packet data protocol context request to said serving GPRS support node.

18. Regarding claim 26, Gilchrist teaches (col. 10, lines 1-48) for registering a wireless local area network coverage area as a new routing area further comprises means for receiving a packet data protocol context accept response from said serving GPRS support node.

19. Regarding claim 27, Gilchrist teaches (col. 10, lines 1-48) means for registering a wireless local area network coverage area as a new routing area further comprises receiving a modified packet data protocol context accept response from said serving GPRS support node.

***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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21. Claims 5, 6, 10, 19 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gilchrist in view of Hurtta (U.S. 7054945 B2).

22. Regarding claims 5 and 19, as mentioned above Gilchrist teaches all of the limitations of claim 1.

23. Gilchrist does not teach defining a GTP tunnel in a GTP-C for at least one Radio Access Bearer (RAB).

24. Hurtta teaches (col. 2, lines 28-29) RAB. It would have been obvious to one of ordinary skill in the art to adapt RAB taught by Hurtta to Gilchrist's system as RAB is well known in the art of UMTS.

25. Regarding claims 6 and 20, Hurtta teaches (col. 2, lines 30 – col. 3, line 6) defining a GTP tunnel in a GTP-C for at least one PDP context with a same PDP address and APN for tunnel management messages.

26. Regarding claim 10, Hurtta teaches (col. 4, lines 66 – col. 5, line 8) the mobile communications network comprises a RNC and the IWF is disposed on a WLAN side of the interworking, and establishing the at least one GTP-U tunnel couples the IWF of the WLAN to the GGSN of the mobile communications network while bypassing the RNC and the SGSN of the mobile communications network.

***Response to Arguments***

27. Applicant's arguments filed July 9, 2008 have been fully considered but they are not persuasive. Applicant argues that establishing at least one tunneling protocol - user plane tunnel between the IWF and the second support node for transferring data signals; and establishing at least one tunneling protocol - control plane tunnel between the first support node and the second support node for transferring control signals. Applicant is directed to col. 5, line 55–67, where it is explained that control data is forwarded to the SGSN while the end-to-end user data is forwarded to the BSS.

***Conclusion***

28. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

29. A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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30. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Roberta A. Shand whose telephone number is 571-272-3161. The examiner can normally be reached on M-F 9:00am-5:30pm.

31. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on 571-272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

32. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Roberta A. Shand  
/R. A. S./  
Examiner, Art Unit 2416

/FIRMIN BACKER/  
Supervisory Patent Examiner, Art Unit 2416